It is believed that the improvements proposed will be found to possess the advantages without the inconvenience of springs. Peculiar advantage will be derived from them on two-wheel carriages. At present, whether on springs or without, in two-wheel carriages in ascending a hill the centre of gravity is thrown back, whereby part of the weight is taken off the horse's back at the very time when it would be more favourable to his draught to have it on. In coming down a hill, on the contrary, an additional load is thrown upon the horse when most injurious. By the improvements proposed, the centre of gravity will remain the same.

Account of an Experiment in fattening eight Bullocks tied up by the Head; four fed with Turnips and Hay, and the other four with Carrots and Hay; with a View of ascertaining the comparative value of Turnips and Carrots. The Turnips were of most excellent quality, and weighed in November, 25 tons, 7 cwt. 6 stone per acre, without their tops. The Carrots weighed, without their tops, 20 tons, 7 cwt. 1 st. 2 lbs. per acre. By Robt. Burrows, of Weasenham, Norfolk.

Bought, 21st November, eight Galloway beasts; and as I had no opportunity of ascertaining their live weight, I invited two able judges to divide the lot as equal as possible, and on the 28th of the same month tied them up: gave the carrot-fed ones six pecks of carrots per day each, with nine pounds weight of hay; the turnip-fed bullocks had what turnips they liked to eat, with the same allowance of hay per day. At the time of tying them up, the point I had in view, was not to see which would fatten quickest, if so, I should have given the carrot beasts all they would have eaten; but the favourite object I had in view, was to compare the quantity of land required under the two different crops, to produce the same quantity of animal food for market, and in an equal space of time. My observations respecting carrots given as food to other animals, led me to conclude that six pecks would be sufficient to fatten a beast of 48 Norfolk stones: the result will shew I was not much aside in my estimate.

The 7th of December, observed the carrot-fed beasts did not eat all the hay that was allowed them; as such, stopped their allowance, and gave them for the next four days only what was taken up from them.

December 11th, found seven pounds of hay would be as much per head as these last-mentioned bullocks would eat: the turnip-fed ones quickly ate their allowance of nine pounds each.

January 9th, found it necessary to give the carrot bullocks one peck of carrots more per day each, as it appeared, upon nice observation, that the turnip beasts had taken the lead.

January 19th, nothing remarkable; both lots appear to be doing as well as can be expected; the weather very severe, and consequently affects stock both within and without doors. The carrot-fed bullocks now appear to have as many carrots allowed them as they can eat.

February 1st. There is now a visible advantage in favour of the carrots. I had this day the gentlemen who divided the lots come to view; they expressed great satisfaction at the progress the whole eight had made; and were decided in their opinion, that the carrot-fed beasts had now taken greatly the lead.

Nothing afterwards occurred worthy notice respecting either lots, until the 21st of March, the time

they were all sold to a Mr. William Everett, of Waltham Abbey, in Essex, a jobber and butcher, at £23. 10s. each; but it was his opinion, at the time of buying them, that the carrot-fed bullocks were thirty shillings per head better than those fed with turnips, a circumstance sufficiently visible to the most common observer.

Expenses of feeding the four beasts with Carrots, from the 28th of November, to the 21st of March, sixteen weeks.

	£.	s.	d.
They ate 796 bushels of carrots, or 47,760*lbs.* weight, the produce of one acre and eight perches of land, at prime cost of 3¼d. per bushel, is.....	10	7	3
——— 28 cwt. of hay, at prime cost, of 1s. 6d. per cwt. is £2. 2s.; or the produce of three roods of land.....	2	2	0
	£.12	9	3

Quantity of Land on which the above four Bullocks were grazed

	A.	R.	P.
Carrots,.....	1	0	8
Hay,.....	0	3	0
	1	3	8

Expenses of feeding four Bullocks with Turnips and Hay, against four others fed with Carrots and Hay; from the 28th November, to the 21st March, following.

	£.	s.	d.
They ate 146,496*lbs.* weight of turnips, the prpduce of two acres, two roods, four perches of land: prime cost thereof.....	18	4	10
——— 36 cwt. of hay, (nine pounds per day each beast,) produce of one acre of land: prime cost.....	2	14	0
	£.20	18	10

Quantity of Land required to fatten these four Bullocks, with the above-mentioned articles.

	A.	R.	P.
Turnips,.....	2	2	4
Hay,.....	1	0	0
	3	2	4

In favour of carrots, one acre, two roods, thirty-six perches, or so much land for the grazier to devote to whatever purposes he pleases; at least the public must be a gainer thereby.

Substitute for Leghorn Plait, for Hats, &c.; by William Corston, of Ludgate Hill. From the transactions of the society for the encouragement of Arts, Manufactures, and Commerce.

HAVING been honoured, in May 1805, with the gold medal of the society, for a substitute for Leghorn plait for hats, it is with great satisfaction that I am enabled to inform you, that this country is beginning to reap those advantages which I foretold to the society six years ago, and that many hundreds of women and children are employed in the various parts of this kingdom in the manufacture of this article.

I sold to two persons, in less than two months, upwards of 5000 scores, and had an order from a third for 2000. But this bears but a small proportion to the demand, and evinces the truth of the statement I made of the great advantages likely to result from the introduction of this new branch of manufacture into this country.

In Joseph Lancaster's book on Education, I have pointed out farther advantages which may be derived by the country at large, from the cultivation of waste and barren lands for the production of the material of which the British Leghorn is made. This has been proved by experiments which I have made on Bagshot Heath, by favour of the Earl and Countess of Harcourt, and in Bedfordshire, by the benevolence and public spirit of the Duke of Bedford, and on barren land in Norfolk, near my native place. Indeed, no soil can be too barren for this purpose, provided the seed will lay (lie). I have shown that 2000 acres might be annually cultivated in the growth